ABSTRACT

A method and system for calibration of a data acquisition path is achieved by applying a voice utterance to a first high quality microphone and reference path and to a test acquisition path including a test microphone such as a lower quality one used in a car. The calibration device includes detecting the power density of the reference signal Y_R through the reference path and detecting the power density of the signal Y_N through the acquisition path. A processor processes these signals to provide an output signal representing a noise estimate and channel estimate. The processing uses equation derived by modeling convolutive and additive noise as polynomials with different orders and estimating model parameters using maximum likelihood criterion and simultaneously solving linear equations for the different orders.